



MARMARA UNIVERSITY - Faculty of Engineering
Environmental Engineering
SYLLABUS
2017-2018 Spring Semester

Course Code	Course Name	Course Type	Weekly Course Hours			Credits	ECTS	Weekly Time & Classroom Schedule
			T	A	L			
ENVE-4062.1	Energy and the Environment	FTE	3	0	0	3	5	Monday 15:30-17:20 MB-345, Friday 14:30-15:20 MC-368
Prerequisite	Prerequisite to							
Course Lecturer	Prof. Dr. S. Sinan Keskin				Office Hours Schedule	Monday 10:30-12:30/ Wednesday 14:30-16:30		
E-mail	sinankeskin@marmara.edu.tr				Office / Room No	MB552		
Phone	(0216) 348 0292 / 1268				Phone			
Teaching Assistant					Office / Room No			
E-mail								
Course Objectives	An introductory course covering energy related physical concepts, nonrenewable and renewable energy production, energy efficiency and conservation, energy use in transportation, and environmental effects of energy related activities.							
Learning outcomes	<ul style="list-style-type: none"> To have knowledge about basic concepts of energy. To have knowledge about fossil fuel types, resources, production techniques. To have basic information about heat engines. To have knowledge about renewable energy sources and production techniques. To have knowledge about nuclear fuels, nuclear power plants, and used fuel storage. To have basic knowledge about energy efficiency and energy conservation. To have basic knowledge about air pollution sources, pollutant types, and their effects. To have basic knowledge about the global climatic effects of energy production activities. 							
Textbooks and/or References	1	Energy and the Environment, 2nd Ed., Robert A. Ristinen and Jack P. Kraushaar, John Wiley & Sons Inc., 2006.						
	2	Energy and the Environment: Scientific and Technological Principles, J. A. Fay and D. S. Golomb, Oxford University Press, 2011.						
Teaching methods	White board, Digital projector.							
WEEK	Date	TOPICS					Reference No - Section	
Week 1	5.02.2018	Energy fundamentals, energy use in an industrial society.					1-1.1, 1.2, 1.3, 1.4, 1.5	
Week 2	12.02.2018	Energy fundamentals, energy use in an industrial society (cont.).					1- 1.6,1.7, 1.8, 1.9	
Week 3	19.02.2018	The fossil fuels.					1- 2.1, 2.2, 2.5, 2.7, 2.8, 2.9	
Week 4	26.02.2018	The fossil fuels (cont.).					1-2.11, 2.12, 2.13, 2.14, 2.15	
Week 5	5.03.2018	Heat engines					1- 3.1, 3.2, 3.3, 3.4, 3.5	
Week 6	12.03.2018	Heat engines (cont.) / Renewable energy systems-Solar energy					1- 3.6, 3.7, 3.8, 4.1, 4.2, 4.3	
Week 7	19.03.2018	Renewable energy systems-Solar energy (cont.) / Alternatives					1- 4.4, 4.5, 4.6, 4.7, 5.1, 5.2, 5.3, 5.4	
Week 8	26.03.2018	Midterm Exams						
Week 9	9.04.2018	Renewable energy systems- Alternatives (cont.)					1- 5.5, 5.6, 5.7, 5.8, 5.9, 5.10	
Week 10	16.04.2018	The promise and problems of nuclear energy					1- 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8	
Week 11	23.04.2018	The promise and problems of nuclear energy (cont.)					1- 6.9, 6.11, 6.12, 6.13, 6.14, 6.15	
Week 12	30.04.2018	Energy conservation					1- 7.1, 7.2, 7.3, 7.4	
Week 13	7.05.2018	Transportation					1- 8.1, 8.2, 8.3	
Week 14	14.05.2018	Air pollution					1- 9.2, 9.3, 9.4, 9.5, 9.6, 9.7	
Week 15	21.05.2018	Air pollution (cont.) / Global effects					1- 9.8, 9.9, 9.10, 10.1, 10.2, 10.3	
Week 16	28.05.2018	Final Exams						
Evaluation Tools	Evaluation Tool	Quantity	Date	Weight in Total (%)	Weight in Semester Evaluation (%)			
	Final Exam	1	5.06.2018	40	0			
	Final Make-up Exam If	1	19.06.2018					
	Semester Evaluation			60	100			
	Midterm	1	3.04.2018	35	58,3			
	Quiz(zes)	1						
	Project(s)	1		15	25,0			
	Homework	8		10	16,7			
	Laboratory	0						
Other	0							
*** Lifelong Learning Programme (LLP) ***						Language of Instruction: English		
Evaluation Tool	Quantity	Student Workload Hours	Evaluation Tool	Quantity	Student Workload Hours			
Theoretical Hours	14	42	Applied Hours					
Midterm	1	8	Final	1	12			
Quiz			Project	1	20			
Laboratory			Homework	8	16			
Atelier			Seminar					
Field Study			Presentation					
Other			Self Study	14	28			
				TOTAL :	39	126,00		
				Recommended ECTS Credit (Total Hours/ 25) :		5		